AMENDMENTS TO THE DRAWINGS

A replacement formal drawing of Figure 6 is submitted herewith.

REMARKS

This communication is a full and timely response to the aforementioned non-final Office Action dated June 18, 2007. By this communication, claims 1, 2, 5, 11-14 and 19 are amended, claims 6-10, 15-18 and 20 are cancelled, and claims 21-26 are added. Claims 3 and 4 are not amended and remain in the application. Thus, claims 1-5, 11-14, 19 and 21-26 are pending in the application. Reexamination and reconsideration of the application are respectfully requested in view of the foregoing amendments and the following remarks.

I.   Amendments to the Drawings

A replacement formal drawing of Figure 6 is submitted herewith to correct an informality. In particular, original Figure 6 contained the misspelled term "serveice." Figure 6 has been revised to correct this misspelled term. No new matter was added via the editorial revision to Figure 6. Accordingly, approval and entry of the replacement formal drawing of Figure 6 are respectfully requested.

II.   Amendments to the Specification

Minor editorial revisions have been made to the specification to correct informalities. The editorial revisions to the specification do not add new matter. Accordingly, approval and entry of the revisions to the specification are respectfully requested.

III.   Rejections under 35 U.S.C. § 101

Claims 1-10 and 19-20 were rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. This rejection is believed to be moot with respect to claims 6-10 and 20 in view of the cancellation of these claims.

The preamble of claim 1 has been amended to recite the computer program as being stored on a computer-readable medium and causing a controlling apparatus to execute the recited procedures. Accordingly, claim 1 defines the functional interrelationship between the computer program, the computer-readable medium and the controlling apparatus which permits the computer program's

functionality to be realized. Therefore, claim 1 recites statutory subject matter under 35 U.S.C. § 101.

The Office asserted that independent claims 1, 5 and 19 do not produce a tangible result. In response to this assertion, independent claims 1, 5 and 19 have each been amended to positively recite a tangible result. In particular, claims 1, 5 and 19 have each been amended to recite that a program that is judged to be an illegal program is removed or isolated. Accordingly, by positively reciting a physical, and hence tangible, result, independent claims 1, 5 and 19 recite patentable subject matter under 35 U.S.C. § 101.

The Office also asserted that the phrase "which, when executed by one or more processors" in the preamble of claim 5 is an "optional" expression that can be interpreted as not including execution. The preamble of claim 5 has been amended to recite that the sequences of instructions "cause a processor of a controlling apparatus...to perform" the recited operations. Accordingly, the preamble of amended claim 5 does not include a conditional expression which permits an interpretation that the sequences of instructions are not executed.

In view of the foregoing amendments and remarks, Applicant respectfully submits that independent claims 1, 5 and 19, as well as claims 2-4 and 21-26 which depend therefrom, recite patentable subject matter under 35 U.S.C. § 101. Therefore, Applicant respectfully requests that the rejection of claims 1-5 and 19 under 35 U.S.C. § 101 be withdrawn.

IV.   Rejections under 35 U.S.C. § 103(a)

A.   Claims 1-2, 5-7, 10-12, 15-16 and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over "Unix Communication Notes: 129" (hereinafter "Notes 129") in view of Seiji (JP 05-108487). This rejection is believed to be moot with respect to claims 6, 7, 10, 15, 16 and 20 in view of the cancellation of these claims.

Claim 1 recites a computer program stored on a computer-readable medium and causing a controlling apparatus intended to control an image forming apparatus to execute the following procedures:

(1) confirming each program running on the controlling apparatus:

(2) judging a program, <u>which is not included in a preset list of programs that can be run to control the image forming apparatus</u> among programs whose running states have been confirmed, as an illegal program resulting from a computer virus infection; and

(3) deleting or isolating the program that is judged to be the illegal program.

Claim 5 recites a computer-readable medium having a plurality of sequences of instructions stored thereon which cause a processor of a controlling apparatus for controlling an image forming apparatus to perform operations corresponding to procedures (1)-(3) of claim 1.

Claim 11 recites a controlling apparatus for controlling an image forming apparatus. The controlling apparatus of claim 11 comprises a storage unit for storing in advance a list of programs that can be run for controlling the image forming apparatus. The controlling apparatus of claim 11 also comprises a processor that is configured to perform functions corresponding to procedures (1)-(2) of claim 1.

Claim 19 recites a controlling method for a controlling apparatus intended to control an image forming apparatus. The method of claim 19 comprises steps corresponding to procedures (1)-(3) of claim 1.

Accordingly, features (1)-(2) of claim 1 are common to each of independent claims 1, 5, 11 and 19. Claims 1, 5, 11 and 19 thus recite that each program running on the controlling apparatus is confirmed, and a program, which is not included in a preset list of programs that can be run to control the image forming apparatus among programs whose running states have been confirmed, is judged as an illegal program resulting from a computer virus infection.

Thus, claims 1, 5, 11 and 19 recite that programs that can be run to control the image forming apparatus are included in a preset list of programs. This preset list therefore contains programs that are known (approved) to control the image forming apparatus. However, if a program is confirmed to be running on the controlling apparatus but that program is not included in the preset list of programs, it is judged to be an illegal program resulting from a computer virus infection.

Notes 129 discloses that a hidden file in a file system (e.g., operating system) can be discovered by comparing an existing list of files present in the file system with a file list that was prepared in advance (see page 1). A "diff command" is then used

to determine whether the existing file list contains any files that are not present in the previously prepared file list.

However, neither the existing file list nor the previously prepared list of Notes 129 are disclosed or suggested as being a preset list of programs that can be run to control an apparatus other than the computer on which the file system is installed. Instead, the files identified in either the existing file list or the previously prepared list of Notes 129 are merely files that are presently existing or have existed in the file system. Notes 129 does not disclose or suggest that any of these files stored in the file system of an apparatus (e.g., computer) can be used to control an image forming apparatus.

Accordingly, the comparison or judgment operation performed in Notes 129 is merely an operation of comparing whether files presently existing in the file system existed in the file system at some previous time. This comparison operation of Notes 129 does not, however, amount to judging whether a program that has been confirmed to be running on a controlling apparatus is or is not included in a preset list of programs that can be run to control an image forming apparatus, as recited in claims 1, 5, 11 and 19.

Furthermore, as acknowledged by the Office, Notes 129 does not disclose or suggest that a program or file is judged to be an illegal program resulting from a computer virus infection.

In an attempt to teach this feature of claims 1, 5, 11 and 19, the Office applied Seiji, which discloses that an application program 3 can issue demands to a computer system's operating system 5, BIOS 7 or hardware 1 (e.g., printer) connected to the computer system (see paragraphs [0009]-[0011]). Seiji discloses that separate virus supervisory systems A-C respectively suitable for operation with the operation system 5, BIOS 7 and hardware 1 intercept a demand from the application program 3 and determine whether the demand is infected with a virus by comparing the demand with a pre-stored list of known viruses (see paragraphs [0016], [0017] and [0026]). The intercepting virus supervisory system A-C prohibits the demand from reaching the operation system 5, BIOS 7 and/or hardware 1 if the demand is infected with a virus that matches a virus stored in the pre-stored list (see paragraph [0016]).

Accordingly, Seiji merely discloses that a demand or communication from an application program is analyzed to determine whether it contains a virus that is identified in a stored list of known viruses.

However, similar to Notes 129, Seiji does not disclose or suggest that a program that is confirmed to be running on a controlling apparatus is judged to be an illegal program resulting from a computer virus infection <u>when the program is not included in a list of programs that can be run to control an image forming apparatus</u>, as recited in claims 1, 5, 11 and 19. Instead, Seiji discloses a list of programs or files that are known viruses, not a preset list of programs that can be run to control an image forming apparatus. Accordingly, Seiji discloses a converse operation to the judging operation of claims 1, 5, 11 and 19.

Therefore, similar to Notes 129, Seiji does not disclose or suggest judging a program, <u>which is not included in a preset list of programs that can be run to control the image forming apparatus</u> among programs whose running states have been confirmed, as an illegal program resulting from a computer virus infection, as recited in claims 1, 5, 11 and 19.

Accordingly, Applicant respectfully submits that Notes 129 and Seiji each fail to disclose or suggest feature (2) of claims 1, 5, 11 and 19.

Consequently, no obvious combination of Notes 129 and Seiji would result in the subject matter of claims 1, 5, 11 and 19, since neither Notes 129 nor Seiji, either individually or in combination, disclose or suggest each and every feature of claims 1, 5, 11 and 19.

Therefore, for at least the foregoing reasons, Applicant respectfully submits that claims 1, 5, 11 and 19, as well as claims 2-4 and 21-26 which depend therefrom, are patentable over Notes 129 and Shoji.

B.   Claims 3, 4, 8, 9, 13, 14, 17 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Notes 129 in view of Seiji and further in view of Yamamoto (U.S. Patent No. 5,881,151). This rejection is believed to be moot with respect to claims 8, 9 13, 14, 17 and 18 in view of the cancellation of these claims.

As demonstrated above, Notes 129 and Seiji each fail to disclose or suggest at least feature (2) of claims 1, 5, 11 and 19.

Similarly, Yamamoto also fails to disclose or suggest feature (2) of claims 1, 5, 11 and 19. Therefore, no obvious combination of Notes 129, Seiji and Yamamoto would result in the subject matter of claims 1, 5, 11 and 19, since Notes 129, Seiji and Yamamoto, either individually or in combination, fail to disclose or suggest each and every feature of claims 1, 5, 11 and 19.

Furthermore, in view of the distinctions discussed above, Applicant respectfully submits that one skilled in the art would not have been motivated or have reason to modify Notes 129, Seiji and Yamamoto in such a manner as to result in, or otherwise render obvious, the subject matter or claims 1, 5, 11 and 19.

Therefore, for at least the foregoing reasons, Applicant respectfully submits that claims 1, 5, 11 and 19, as well as claims 2-4 and 21-26 which depend therefrom, are patentable over the applied references.

V.   Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. Accordingly, Applicant requests a favorable examination and consideration of the instant application.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: <u>November 19, 2007</u>   By: _____

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